

Common Injuries in Teens Aged 15-19 Years

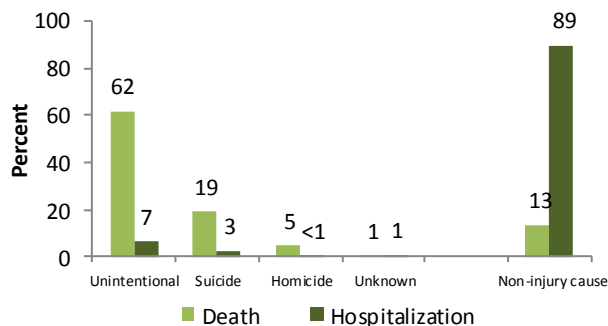
Montana, Summer, 2012

Unintentional injuries cause 62% of all teen deaths in Montana

Teenagers face a variety of situations that put them at risk for unintentional and intentional injury. Eighty seven percent of all deaths in this age group were due to an injury with the most common being an unintentional injury (Figure 1). Awareness of age-specific risks are key to effective prevention. This report examines the specific injury-related causes of death and hospitalization for teenagers aged 15-19 years.

Mortality data for this report are from the Montana Office of Vital Statistics (OVS) for 2001-2010 using ICD-10.¹ Hospitalization data are from the Montana Hospital Discharge Data System (MHDDS) for 2009-2011 using ICD-9-CM;² external cause of injury coding (E-coding in MHDDS was incomplete before 2009). Injuries leading to deaths or hospitalization were classified by intent and mechanism according to the CDC Injury Matrices and the Safe Sates Alliance criteria.^{3,4} Seven percent (n=59) of injury hospitalizations in this age group had no information about the mechanism of injury and were excluded from analysis.

Figure 1. Percent of all teen deaths and hospitalizations due to injury, by intent, Montana, OVS, 2001-2010, MHDDS, 2009-2011



Two of every five deaths among teens aged 15-19 years were occupants in a motor vehicle crash

Figure 2. Most common unintentional injury deaths among teens by mechanism, OVS, 2001-2010

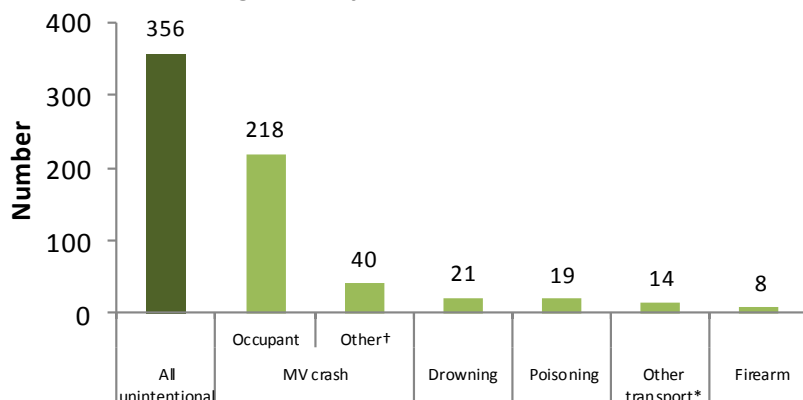
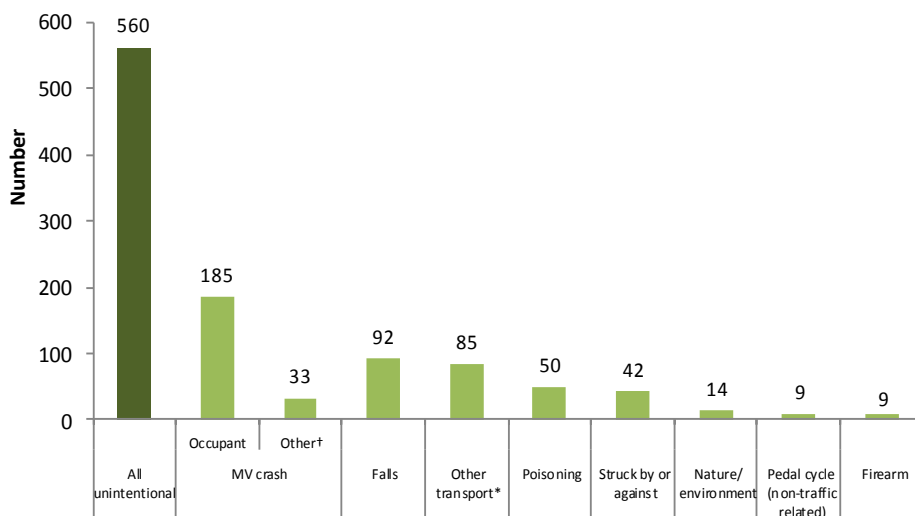


Figure 3. Most common unintentional injury hospitalizations among teens by mechanism, MDHHS, 2009-2011



Causes of unintentional injuries

- Injury deaths accounted for a large percentage of all deaths among teens aged 15-19 years. Injury hospitalizations accounted for a smaller percentage of all hospitalizations for this age group (Figure 1).
- About two thirds of unintentional injury deaths (67%) and hospitalizations (64%) were among males (data not shown).
- Most unintentional injury deaths among teens aged 15-19 years were due to motor vehicle (MV) crashes, with the majority of events involving the occupants of the vehicle. The second most common cause was drowning (Figure 2).
- The most common cause of unintentional injury hospitalizations for teens aged 15-19 years was a MV crash (39%) (Figure 3).
- The next most common causes of injury hospitalization for teens aged 15-19 years were falls, other transport crashes (non-traffic transport such as ATVs and snowmobiles) and poisoning (Figure 3).
- One quarter (27%) of unintentional injury hospitalizations among teens aged 15-19 years included traumatic brain injuries (TBI) (data not shown).

For figures 2 and 3,

† Injured person was motorcyclist, pedal cyclist, pedestrian, or other person injured in traffic

* Other transport include non-traffic transport such as ATVs and snowmobiles

Prevention Opportunities

As children enter their teenage years, they are developing more independence and often lack experience to respond to situations that place them at risk for injuries. Below is a list of common injury hazards and ways to prevent them.

MV crash: Proper restraint is crucial to protect occupants in the event of a crash. Seatbelts should be used during every trip in a vehicle. Montana law requires every vehicle occupant be properly restrained. Sufficient education and practice can also help prepare teens for safe driving. Never drive while under the influence of alcohol or other substances and do not drive while distracted by texting, talking on the phone, or other disturbances.

Falls: Severe injuries, including serious head injuries, can be associated with a fall. Sports like skateboarding, roller skating, using scooters, skiing, or snowboarding carry a significant risk for falling. Always wear protective equipment including a helmet while doing these activities and use equipment that is appropriate for the user's skill level.

Drowning: Open water like lakes, streams, and rivers pose hazards that may not be apparent. Never dive into waters without first assessing the depth, always swim with another person, and wear a personal flotation device when swimming or boating. Do not swim or boat while under the influence of alcohol or drugs. Swimming lessons are an important step to prevent drowning.

Poisoning: Teens may experiment with many substances recreationally to get 'high,' or to commit suicide. Of growing concern is the recreational use of prescription medications and inhaled substances. Parents should keep all medications in a secure place in their original containers and talk to teens about the dangers of using medications and other substances for recreational purposes. Seek help if a teen is exhibiting signs of depression or talks about suicide. Post the poison control center hotline number (1-800-222-1222) in easy to find locations.

Bicycles: Wearing a helmet is an important part of bicycle safety. It should fit properly and meet set safety standards. Bicyclists should know the rules of the road and use proper signals, lighting, and reflective gear and make sure their bicycles are in good working condition.

Other transport: Protective equipment should be used while riding all-terrain vehicles (ATVs), snowmobiles, and horses. Also, proper education and use of only age-appropriate size of vehicle can help reduce injuries. Children younger than 18 years old are required to wear a helmet in Montana when riding motorized vehicles on public roads.

Firearms: Accidental discharges of a firearm often occur due to curiosity or lack of safety knowledge. Guns are also the most common weapon used by teens who commit suicide. Store firearms locked, unloaded, and away from ammunition to keep teens safe. Watch for warning signs of suicide like depression and drug abuse and talk with teens about their thoughts and feelings.⁵

Struck by or against an object: Sports are often a cause of being struck by an object. Traumatic brain injuries (TBIs) are serious injuries caused by a bump or hit to the head or a blow to the body that jars the head. Sign and symptoms include confusion, loss of coordination, nausea, headache, or concentration or memory problems. Athletes and any other person experiencing a hit to the head and having any of the signs and symptoms should be evaluated by a health care professional (HCP). Always wear activity appropriate protective gear to prevent TBIs, but if a TBI is sustained, do not resume activity until cleared by an HCP.⁶

For more information on injury prevention among teens in Montana see the Montana Injury Prevention Program's website at www.dphhs.mt.gov/ems/prevention/prevention_menu.html or contact the Montana Injury Prevention program at: bperkins@mt.gov, 406-444-4126.

Methods and Limitations

Data on deaths in this report were made available by the Vital Statistics Analysis Unit of the Montana Department of Public Health and Human Services (DPHHS). Data on hospitalizations were supplied by the Montana Hospital Discharge Data System (MHDDS) of the Montana DPHHS. The hospitalization data are made available through a Memorandum of Agreement with the Montana Hospital Association (MHA) and are the property of the MHA. The authors of this document are responsible for all analyses and conclusions reported.

References:

1. <http://apps.who.int/classifications/icd10/browse/2010/en>
2. <http://icd9cm.chrisendres.com/index.php?action=contents>
3. http://www.cdc.gov/nchs/injury/injury_matrices.htm
4. Injury Surveillance Workgroup. Consensus recommendations for using hospital discharge data for injury surveillance. Marietta, GA: Safe States Alliance; 2003.
5. Think First. Fast Facts: Firearm Safety. <http://www.thinkfirst.org/teens/ViolencePrevention.asp>
6. Centers for Disease Control and Prevention. Injury Prevention and Control: Traumatic Brain Injury. <http://www.cdc.gov/traumaticbraininjury/>

